Message

From: Nguyen, Lyndsey [Nguyen.Lyndsey@epa.gov]
Sent: 1/30/2017 9:44:06 PM
To: Nwosu, Bernard [Ben.Nwosu@WestonSolutions.com]; Gaughan, Daniel [Gaughan.Daniel@epa.gov]
Subject: Re: Canadian Radium & Uranium Corp. Site - Unvalidated Analytical Results

Hi Ben and Dan,

I took a look at the lab report, and I seem to have even more questions for the laboratory. I didn't see in the narrative of the laboratory report any counting times or MDCs that they were trying to reach (e.g. MCLs). I can't really make sense of the data with the huge variability in the uncertainties. I chatted with my buddy, Dave Kappelman (who is the best gamma spectrometry expert of any Health Physicist that I know). He has ideas of how to interpret the data, but he wanted to know a little more of how the samples were taken. I was wondering if we could get on a conference call this week? Do you guys have any time this week?

In general, yes, it looks like TW-1-01, TW-3-01, and TW-3-02 show at a minimum elevated radium (Ra-226 and Ra-228 combined is over the MCL of 5pCi/L) as we suspected.

-Lyndsey

From: Nwosu, Bernard <Ben.Nwosu@WestonSolutions.com>
Sent: Thursday, January 26, 2017 7:45:36 AM
To: Gaughan, Daniel; Nguyen, Lyndsey
Subject: RE: Canadian Radium & Uranium Corp. Site - Unvalidated Analytical Results

Hi Dan/Lyndsey,

Before I contact the lab please can you take a quick look at the attached lab report and let me know if the MDC values included in the report will meet your needs as against MDA. I looked at lab reports for prior sampling events and the values were also reported based on MDC.

In addition, I contacted the lab prior to your email to get some clarification regarding ingrowth for aqueous samples and the received the following response:

"The aqueous samples were analyzed using radiochemical methods 903.1 for Ra-226 and 904.0 for Ra-228. The results reported for these two methods are superior. These two methods are performed using ingrowth techniques. For the Ra-226 analysis, the samples were in ingrowth for approximately 5 days. An ingrowth factor was applied to all reported results.

Ra-226 and Ra-228 were also analyzed by 901.1 Gamma Spec. For aqueous samples, the 901.1 method is not as precise for measurement of these two analytes. For this method the concept of ingrowth is not applied for the analysis."

Please let me know if you have further questions.

Thanks,

Ben Nwosu
Senior Project Scientist / Group Leader
Weston Solutions, Inc.

From: Gaughan, Daniel [mailto:Gaughan.Daniel@epa.gov]
Sent: Wednesday, January 25, 2017 5:48 PM
To: Nwosu, Bernard <Ben.Nwosu@WestonSolutions.com>
Cc: Nguyen, Lyndsey <Nguyen.Lyndsey@epa.gov>
Subject: Fwd: Canadian Radium & Uranium Corp. Site - Unvalidated Analytical Results

Ben,
See Lyndsey's email below and let me know if you can answer her questions.
Thanks,
Dan

Dan Gaughan
917-613-2153
gaughan.daniel@epa.gov

Begin forwarded message:

> **From:** "Nguyen, Lyndsey" <Nguyen.Lyndsey@epa.gov>
> **Date:** January 25, 2017 at 5:23:05 PM EST
> **To:** "Gaughan, Daniel" <Gaughan.Daniel@epa.gov>
> **Subject: RE: Canadian Radium & Uranium Corp. Site - Unvalidated Analytical Results**
>
> Howdy Dan,
>
> Ok, I took a look at these and I am trying to find a way to interpret the data. Do you know, or maybe Ben, how long these samples were counted? Was there an MDA (minimal detectable activity) they were trying to reach? Does the lab still have the samples by any chance?

Lyndsey Nguyen
Environmental Response Team-Las Vegas
Phone: 702.784.8018
Cell: 702-373-3756
Email: Nguyen.Lyndsey@EPA.gov

From: Gaughan, Daniel
Sent: Tuesday, January 17, 2017 7:19 AM
To: Nguyen, Lyndsey <Nguyen.Lyndsey@epa.gov>
Subject: FW: Canadian Radium & Uranium Corp. Site - Unvalidated Analytical Results

Lyndsey,
See attached data from Can Rad gw samples. What do we compare these with?

We are still trying to determine gw flow direction. Hopefully we will have that information soon.

I asked Ben to have this gw data validated ASAP.

Dan

Dan Gaughan
On-Scene Coordinator, US EPA Region II
gaughan.daniel@epa.gov
732-906-6984 office
917-613-2153 cell

From: Nwosu, Bernard [mailto:Ben.Nwosu@WestonSolutions.com]
Sent: Tuesday, January 17, 2017 10:13 AM
To: Gaughan, Daniel <Gaughan.Daniel@epa.gov>
Subject: Canadian Radium & Uranium Corp. Site - Unvalidated Analytical Results

Good morning Dan,

Attached please find the unvalidated analytical results table and laboratory report for the groundwater sampling event conducted at the Canadian Radium and Uranium Corp. Site on December 14, 2016.

Please let us know what EPA action levels to compare the results with and we can update the data table accordingly. If you have any comments or questions please let me know.

Thanks,

Ben Nwosu
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